Application No.: 10/733,789                                    Docket No.: MWS-087RCE

## REMARKS

In the foregoing amendments, claims 1, 39 and 77 have been amended. Claims 1-83 are currently pending, of which claims 1, 39 and 77 are independent. No new matter has been added.

### Summary of Claim Rejections

Claims 77-83 stand rejected under 35 USC §101 as being directed to non-statutory subject matter.

Claims 1-83 stand rejected under 35 USC §102(b) as being anticipated by *The MathWorks* "Simulink: Model-based and System-based Design," *Using Simulink*, Version 5, copyright 1990-2002, last printed July 2002, ch. 2-11, 13-14 (hereafter "Simulink5").

These rejections will be discussed separately below.

### Claim Rejections under 35 USC §101

The Examiner rejected claims 77-83 under 35 U.S.C. §101 as being directed to non-statutory subject matter (Office Action, paragraph 7). More specifically, the Examiner indicated the claims failed to recite a hardware embodiment for the system. Applicants have amended independent claim 77 herein so that it recites hardware elements supporting the debugger and model and execution list views. Accordingly, Applicants request reconsideration of the outstanding rejection of claim 77 under 35 U.S.C. §101.

Claims 78-83 depend from independent claim 77 and, as such, the amendment to claim 77 applies to claims 78-83. Accordingly, Applicants also respectfully request reconsideration and allowance of claims 78-83.

### Claim Rejections under 35 USC §102

14

Application No.: 10/733,789                                    Docket No.: MWS-087RCE

The Examiner rejected claims 1-83 under 35 U.S.C. §102(b) as being anticipated by Simulink5 (Office Action, paragraph 9). Applicants respectfully traverse the rejection for the reasons set forth below.

Independent claim 1 as amended recites:

> In a graphical modeling and execution environment, a method comprising the steps of:
> providing a model view and an execution list view of a model being executed, said model view graphically depicting a plurality of components of said model, said execution list view displaying **a dynamically updated execution list depicting the execution order of a plurality of methods called during the execution of a time step of said model, the dynamically updated execution list changing during the execution of the model to list the methods that have been called during the time step until a specified point in execution**, said model view interfaced with a debugger; and
> indicating visually a state of the **dynamically updated** execution list on said model view **at the specified point in the time step.** [emphasis added]

Applicants have amended claim 1 in an attempt to clarify the scope of the claimed invention. Applicants have recited that the execution list is a dynamically updated list that changes during the execution of the model to list the methods that have been called up until a specified point of a time step. Applicants have also amended claim 1 to indicate that the state of the dynamically updated execution list that is being displayed on the model view is the state of the execution list at the specified point in the time step.

Applicants respectfully submit that the Simulink5 reference fails to disclose at least the following elements of claim 1: (a) "displaying a dynamically updated execution list depicting the execution order of a plurality of methods called during the execution of a time step of said model, the dynamically updated execution list changing during the execution of the model to list the methods that have been called during the time step until a specified point in execution;" and (b) "indicating visually the state of the dynamically updated execution list on said model view at the specified point in the time step." As will be explained in more detail below, these elements are not disclosed by Simulink5.

Applicants' invention exposes debugging and/or execution information to a user executing a model. By exposing the dynamically updated execution list of all of the methods called during the time step up until a specified point, such as a user-set

15

Application No.: 10/733,789                              Docket No.: MWS-087RCE

breakpoint, Applicants' invention allows the user to exercise fine-grained control over the debugging/execution of the model. This is a significant departure from conventional debugging methods which only exposed the value of output methods at the end of a time step.

The Simulink5 reference cited by the Examiner is generally directed to the use of SIMULINK in modeling and simulating dynamic systems. The Examiner identified pages 2-10, 2-11, 2-19, 2-20 and page 5-16 -> 5-17 in the Simulink5 reference (Office Action, paragraph 9) as disclosing "an execution list view showing an execution list depicting the execution order of methods called during the execution of a time step of said model," as required by (the previous version of) claim 1. While disagreeing with the Examiner's interpretation as to the disclosure of the elements of the previous versions of Applicants' independent claims for the reasons set forth in the previous Office Action Response, Applicants respectfully submit that Simulink5 clearly fails to disclose the dynamically updated execution list required by the amended claim 1.

The cited sections of Simulink5 fail to disclose the dynamically updated execution list list depicting the execution order of a plurality of methods called during execution of a time step until a specified point in the time step that is required by Applicants' amended claim 1. Rather, the cited sections discuss generally elements of the SIMULINK® software offered for sale by The MathWorks, Inc. of Natick, Massachusetts. More specifically, on page 13-21, Simulink5 states: "During simulation, Simulink maintains a list of blocks sorted by execution order. This list is called the sorted list. In GUI mode, the debugger displays the sorted list in its Execution Order panel." [emphasis added] Thus, the discussion of the 'sorted list' in Simulink5 discusses maintaining and displaying a list of blocks sorted by execution order. In contrast, claim 1 requires displaying an execution list of methods called during execution of the model. Since there may be multiple methods within each block in the model that need to execute in a certain order for the model to execute properly, a list of the execution order of blocks for a model is not the same and does not anticipate a list of an execution order of methods for a model.

In the Office Action, the Examiner also pointed to the discussion of a "Math Function block," "Sum block," "Product block," etc, as disclosing the "execution list" required by claim 1 (Office Action, paragraph 9). The aforementioned blocks, referenced by the Examiner in the

16

Application No.: 10/733,789                              Docket No.: MWS-087RCE

Simulink5 reference, are examples of blocks, not methods. A block is not synonymous with a method. Blocks may include more than one method and a method may execute multiple times in different contexts during a time step. Applicants thus contend that the aforementioned list of blocks cannot be considered an execution list view as recited by claim 1. Furthermore, for the sake of argument, even in the event a broad interpretation of the claim language led to the list of blocks being considered an 'execution list', it clearly is not a "dynamically updated execution list changing during the execution of the model to list the methods that have been called **during the time step until a specified point** in execution" that is required by the amended claim 1.

The Examiner also identified pages 5-16 -> 5-24 and pages 13-20 -> 13-26 of Simulink5 (Office Action, paragraph 9, page 6) as disclosing the claim element of: "indicating visually the state of the execution list on said model view." Applicants respectfully disagree.

Applicants' amended claim requires the visual indication of the state of the dynamically updated execution list on the model view **at the specified point in the time step.** The Simulink5 reference states on page 5-17: "To display the execution order of blocks during simulation, select Execution order from the Simulink Format menu. Selecting this option causes Simulink to display a number in the top right corner of each block in a block diagram. The number indicates the execution order of the block relative to other blocks in the diagram." The cited section is discussing the block execution order, not the execution order of the methods in the model **during each time step** and is therefore not visually indicating on the model view which methods have been called **during a time step up until a specified point**, as required by the amended claim 1.

With regard to pages 13-20 -> 13-26 of Simulink5 that were cited by the Examiner, page 13-20 of the Simulink5 reference states "The states debug command lists the current values of the system's states in the MATLAB command window." This section also fails to disclose the visual indication of "a state of the dynamically updated execution list on said model view at the specified point in the time step" required by the amended claim 1claim 1 for a number of reasons. First, the reference discusses indicating the current values of the system's states, but does not disclose indicating the **state of the dynamically updated execution list** as required by Applicants' claim 1. Secondly, the Simulink5 reference on page 13-20 discusses displaying the

17

system's states in the *MATLAB command window.* In contrast, claim 1 requires indicating visually the state of the dynamically updated execution list on the model view. The command window in the MATLAB® software offered by The MathWorks, Inc. of Natick, Massachusetts at the time of the application did not display a model view of the block diagram (which claim 1 has been amended to note is a **graphical depiction** of a plurality of components in the model), and Simulink5 thus fails to disclose not only the display of a dynamically updated execution list but also fails to disclose the display of a dynamically updated execution list on the model view.

In summary, Simulink5 simply does not provide a dynamically updated execution list view that depicts the execution order of methods during a time step up until a specified point in the execution of the time step. It therefore also fails to indicate visually the state of this dynamically updated execution list on the model view.

In view of the above arguments, Applicants respectfully request reconsideration and allowance of claim 1.

Claims 2-38 depend from independent claim 1 and, as such, incorporate all of the elements of claim 1. Accordingly, claims 2-38 are allowable for at least the reasons set forth above with respect to claim 1. Applicants therefore respectfully request reconsideration and allowance of claims 2-38.

Independent claim 39 is a medium claim corresponding to independent claim 1. Applicants submit that the arguments set forth above with respect to claim 1 are also applicable to claim 39. Accordingly, Applicants respectfully request reconsideration and allowance of claim 39.

Claims 40-76 depend from independent claim 39 and, as such, incorporate all of the elements of claim 39. Accordingly, claims 40-76 are allowable for at least the reasons set forth above with respect to claim 39. Applicants therefore respectfully request reconsideration and allowance of claims 40-76.

Amended independent claim 77 recites:

A system in an electronic device having a graphical design environment, said system comprising:

18

storage for a debugger, said debugger gathering debug information from the simulation of a model in said graphical design environment; and

a display device in communication with said electronic device, the display device displaying:

a model view, said model view displaying a plurality of components of a model and being interfaced with said debugger; and

an execution list view, said execution list view displaying **a dynamically updated execution list depicting an execution order of a plurality of methods called during the execution of a time step of** said model, **the dynamically updated execution list changing during the execution of the model to list the methods that have been called during the time step until a specified point in execution of the time step,** said execution list view state being visually represented on said model view, said execution list view being generated by said debugger.

As noted above with regard to claim 1, the Simulink5 reference fails to disclose either a dynamically updated execution list view that depicts the execution order of methods called during a time step until a specified point in the time step or a visual indication of the dynamically updated execution list view on the model view. Accordingly, Applicants respectfully request reconsideration and allowance of claim 77.

Claims 78-83 depend from independent claim 77 and, as such, incorporate all of the elements of claim 77. Accordingly, claims 78-83 are allowable for at least the reasons set forth above with respect to claim 77. Applicants therefore respectfully request reconsideration and allowance of claims 78-83.

19

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Application No.: 10/733,789             Docket No.: MWS-087RCE

## CONCLUSION

In view of the above, Applicant believes the pending application is in condition for allowance.

Dated: June 25, 2007           Respectfully submitted,

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20